New York State

INSTITUTE

1948 1949

of APPLIED ARTS *and* SCIENCES

Binghamton, New York

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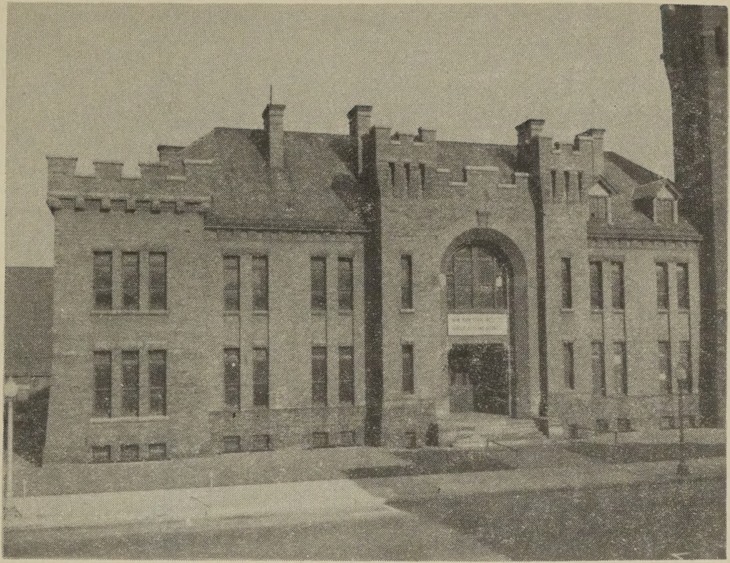


FACILITIES

The New York State Institute of Applied Arts and Sciences at Binghamton is located at 227 Washington Street in the heart of the business section. It is housed in the building formerly used as a State Armory. The 60,000 square feet of floor space has been converted into an educational plant with classrooms, laboratories, shops, library, gymnasium and cafeteria.

LOCATION

Binghamton is located in south-central New York in the valleys of the Susquehanna and Chenango rivers. Close by are the villages of Johnson City and Endicott, forming with Binghamton, the Triple Cities community with a population of 115,000. Binghamton is served by three railroads, local and through bus lines and commercial air transportation.

OBJECTIVE

The Institute at Binghamton is one of five new State technical institutes established at Buffalo, New York City, White Plains, Utica and Binghamton to provide intensive training in the technologies and applied arts. There is an increasing demand for personnel with sufficient theoretical and practical background in the technical field to assume responsible positions on the sub-professional level. Preparation for technical employment of this kind requires more advanced training than that offered in the secondary schools but need not involve the cost in time and money of the four-year college program. This type of instruction is offered by the Institutes in two-year courses of study varying with regional needs and designed to prepare students for immediate employment.

The Institute at Binghamton offers two main groups of courses. The first group trains for technical positions in industrial planning and production, plant operation and maintenance, drafting, design and testing. The second group prepares young men and women to be assistants in medical, dental and technical offices.

OPPORTUNITIES

The Southern Tier area is predominantly industrial. More than 300 items are manufactured, among which are business machines; cameras, film and photographic equipment; shoes and leather goods; dies and tools, and automotive accessories. The diversity of the manufacturing, retail and service establishments will provide a ready market for Institute graduates.

ADMISSION

Enrollment is open to men and women graduates of a four-year course of high school study. Extensive high school preparation in mathematics and science is desirable for those who wish to enroll in the technology courses. Any major sequence satisfactory for graduation in an academic or college preparatory course is an adequate prerequisite for the office assistants' courses.

LENGTH OF COURSES

Courses are two years in duration. Each year is divided into four twelve-week quarters. Three quarters per year are spent in class and one quarter in employment. Classes meet Monday through Friday from 8 a.m. to 5 p.m.

EXPENSES

Tuition is free to residents of New York State. The non-resident (out-of-state) tuition fee is $300 per year. The student is required to purchase his own books and supplies and to pay the incidental laboratory and student activity fees. Such expenses are not expected to exceed $150 per year.

HOUSING

The Institute will assist out-of-town students in finding suitable living quarters. Because of the critical housing shortage, such students are urged to try to establish a residence with relatives or friends who may live within commuting distance of the Institute.

DIPLOMA

A diploma will be awarded to students who successfully complete the requirements for graduation.

THE PROGRAM

The Institute program of instruction in classroom, laboratory and shop emphasizes the fundamentals needed to prepare students for practical, responsible work.

Mathematics is taught as a "tool" subject rather than as an end in itself. There are no separate courses in algebra, trigonometry, analytics or calculus; instead, the essential mathematical relationships are taught to enable the student to understand the theory studied and to find solutions to practical problems.

Science is taught as the basis of industrial and technical developments in machines, processes, and control, that constitute modern practice.

Drawing is taught as the best method of representing technical concepts and of indicating altered or new designs and processes.

Non-technical courses provide the background to help students become competent members of industry and of the community.

Laboratory and Shop courses are designed to provide sound training in the application of basic information, in the characteristics, the use and limitations of modern industrial apparatus and equipment. The shop work is not vocational in character; it familiarizes the student with good shop practice, develops some manipulative skill, and establishes proper standards of performance. The laboratory work gives the student actual experience with industrial equipment and trains him to use such equipment effectively.

OUTLINE OF COURSES

CHEMICAL TECHNOLOGY

First Term	
Mathematics	5
Chemistry	10
Drawing	3
Shop	6
Communication Skills	3
Modern Society	3
	30

Second Term	
Mathematics	3
Qualitative Analysis	12
Drawing	3
Electricity, Light & Sound	6
Communication Skills	3
Economic Problems	3
	30

Third Term	
Mathematics	3
Quantitative Analysis	9
Mechanics	5
Electrical Machinery	5
Communication Skills	3
Sociology	3
	28

First Term	
Quantitative Analysis	5
Organic Chemistry	9
Mechanics of Fluids	5
Unit Operations	5
Instrumentation	5
	29

Second Term	
Organic Chemistry	5
Physical Chemistry	6
Industrial Chemistry	5
Metals & Alloys	6
Strength of Materials	6
Cost Accounting	3
	31

Third Term	
Industrial Chemistry	5
Physical Chemistry	6
Heat & Power	5
Industrial Electronics	5
Non-technical Elective	3
	24

ELECTRICAL TECHNOLOGY

FIRST YEAR	*Hours per Week*
First Term	
Mathematics	5
Drawing	6
Electricity	7
Electrical Shop	6
Communication Skills	3
Modern Society	3
	30
Second Term	
Mathematics	3
Drawing	6
Electricity	9
Electrical Shop	6
Communication Skills	3
Economic Problems	3
	30
Third Term	
Mathematics	3
Drawing & Mechanisms	3
Electricity	7
Electrical Shop	6
Mechanics	5
Communication Skills	3
Sociology	3
	30

SECOND YEAR	*Hours per Week*
First Term	
Mathematics	3
Drawing	3
Electricity	7
Industrial Electronics	7
Metallurgy & Strength of Mat'ls.	7
Cost Accounting	3
	30
Second Term	
Drawing	3
Electricity	7
Industrial Control	7
Industrial Electronics	7
Heat & Thermodynamics	5
Industrial & Labor Relations	2
	31
Third Term	
Drawing	3
Electricity	7
Industrial Control	6
Industrial Electronics	7
Chemistry	5
Production & Management	2
	30

MECHANICAL TECHNOLOGY

First Term	
Mathematics	5
Drawing	6
Shop	6
Mechanics	5
Communication Skills	3
Modern Society	3
	28
Second Term	
Mathematics	3
Drawing	3
Shop	6
Mechanics	6
Electricity, Light & Sound	6
Communication Skills	3
Economic Problems	3
	30
Third Term	
Mathematics	3
Mechanisms	6
Shop	3
Heat	5
Chemistry	5
Communication Skills	3
Sociology	3
	28

First Term		
Mathematics		3
Mechanisms		3
Shop		3
Metals & Alloys		6
Strength of Materials		6
Electrical Machinery		5
		26
Second Term		
Mechanical Machinery		5
Machine Design		6
Industrial Electronics		5
Industrial Management		3
Elect		
Adv. Metal Processing	5	
Cost Accounting	4	
or		
Mechanical Calculations	3	
Properties of Materials	6	9
		28
Third Term		
Bus. Organization & Financing		3
Project		6
Non-technical Elective		3
Inspection Trips		2
Elect		
Personnel Administration	3	
Quality Control	3	
Production Design	5	
or		
Tool Design	5	
Machine Design	6	11
		25

MEDICAL OFFICE ASSISTANT

FIRST YEAR	*Hours per Week*	*SECOND YEAR*	*Hours per Week*
First Term		*First Term*	
Typewriting	5	Typewriting	4
Shorthand	5	Shorthand	4
Mathematics	5	Bookkeeping	3
Chemistry	5	Materia Medica	5
Communication Skills	3	Office Practices	2
	23	Laboratory Practice	3
		Economic Problems	3
			24
Second Term		*Second Term*	
Typewriting	5	Shorthand	3
Shorthand	5	Office Practice	6
Mathematics	3	Physics	5
Anatomy	4	Laboratory Practice	4
Chemistry	6	Sociology	3
Communication Skills	3	Non-technical Elective	3
	26		24
Third Term		*Third Term*	
Typewriting & Shorthand	4	Transcription	5
Anatomy	3	Office Techniques	5
Materia Medica	3	Pediatrics	2
Office Practices	2	Laboratory Practice	5
Laboratory Practice	6	Purchasing & Accounting	3
Communication Skills	3	Non-technical Elective	3
Modern Society	3		23
	24		

TECHNICAL OFFICE ASSISTANT

FIRST YEAR			*Hours per Week*
First Term			
Typewriting			5
Mathematics			5
Drawing			3
Shop			3
Communication Skills			3
Elect			19
Shop	3		
Psychology	3		
or			
Shorthand		5	
	25	24	
Second Term			
Typewriting			5
Mathematics			3
Drawing			3
Shop			3
Communication Skills			3
Modern Society			3
Elect			
Mechanisms		5	
or			
Shorthand		5	
			25
Third Term			
Typewriting			3
Mathematics			3
Chemistry			6
Communication Skills			3
Economic Problems			3
Elect			
Drawing		5	
or			
Shorthand		5	5
			23

SECOND YEAR	*Hours per Week*
First Term	
Office Practice	6
Bookkeeping	3
Mechanics and Heat	6
Electricity, Light & Sound	6
Sociology	3
	24
Second Term	
Office Practice	6
Bookkeeping	3
Transcription	6
Strength of Materials	6
Non-technical Elective	3
	24
Third Term	
Office Practice	6
Metals and Alloys	6
Report Writing	3
Business Law	3
Organization and Management	3
Non-technical Elective	3
	24

Note: Three hours of health are required in addition to the preceding schedules.

DESCRIPTION OF COURSES

CHEMICAL TECHNOLOGY

The course in Chemical Technology is designed to provide (1) training in the basic fields of chemistry and laboratory techniques, and (2) work in shop, drawing and the use of chemical plant equipment to prepare students for positions in plant layout and operation.

Graduates will be qualified for employment leading to responsible positions in the manufacturing fields, plant design and construction, and quality control, as well as for laboratory work and technical sales. It is expected that the best opportunities for employment and advancement may be found in the industrial field.

ELECTRICAL TECHNOLOGY

The course in Electrical Technology is planned to provide (1) general training in mathematics, technical drawing and the sciences on which electrical work is based; (2) specific training in electricity and the application of electrical energy to circuits, direct and alternating current machinery, industrial control equipment and industrial electronic apparatus.

Graduates of the electrical course should be able to fill positions that may lead to responsible work as engineering aides, electrical draftsmen, production and maintenance foremen, laboratory technicians, research, project and control engineers' assistants.

MECHANICAL TECHNOLOGY

The mechanical field embraces a wide area of activity covering the design and operation of mechanical equipment as well as the field of manufacturing in general. Most machines in use today involve mechanical operations even when the main function may be performed and controlled electrically.

The Mechanical Technology curriculum provides training in basic courses such as mathematics, mechanisms, drawing, shop and chemistry, and at the end of the fourth term permits specialization in production supervision or machine design. Classroom theory is correlated with shop and laboratory work so that the student becomes familiar with the basic tools and machines used in the mechanical field.

Graduates will be qualified for employment in the mechanical phases of design and manufacture in such positions as draftsman, layout man, laboratory assistant, mechanical maintenance man, installation and service technician. There is opportunity for advancement to supervisor, methods man, master mechanic, and tool and machine designer.

MEDICAL OFFICE ASSISTANT

The Medical Office Assistant course is planned to prepare a young woman for a position in the office and laboratory of a doctor. Her duties as a receptionist and secretary include making appointments and engagements, taking care of correspondence and patients' records, making out compensation insurance forms, and ordering drugs, medicines and equipment. As a laboratory technician, she may make blood counts, perform urinalyses, sterilize instruments, and prepare patients for examination. This course offers graduates interesting and dignified employment,the opportunity for advancement and a close association with the medical profession.

The curriculum includes (1) technical training: aseptic methods, chemical tests and laboratory practice; (2) general training: office practice, typewriting, shorthand, bookkeeping, history taking, recording and filing.

TECHNICAL OFFICE ASSISTANT

Engineers, architects, public works and industrial purchasing departments require the services of office assistants with special training. The technical office assistant performs the duties of a stenographer. Additional duties may include the writing of specifications, setting up instructions for the use of drawings and blueprints, cataloging and filing of technical books and publications, summarizing technical reports and interpreting employer's orders to less experienced personnel. Technical office assistant occupations are open to both men and women.

The curriculum offers (1) special courses to familiarize the student with shop and laboratory equipment, procedures and terminology; and (2) general courses in office practice, typewriting, shorthand and bookkeeping.

GENERAL COURSES

Each curriculum includes, in addition to the subjects described above, a number of general courses required of every student. Technical training is supplemented by non-technical education to prepare the student to become a responsible worker and member of society.

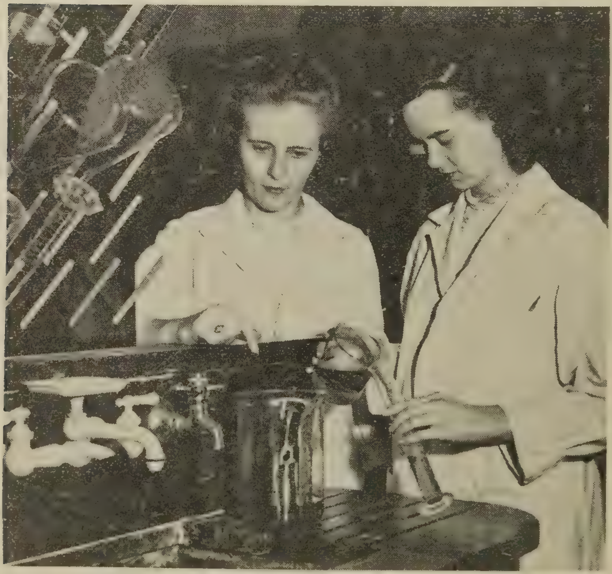
The communication course is designed to improve the student's language facility through the development of skill in speaking, writing and reading. The political, social and economic problems affecting the technical worker are considered in the social sciences. In the health course, two periods a week are devoted to physical exercise and group recreation, and one period to classroom instruction in the bases of good health, both personal and social. The study of industrial safety principles is an important part of the course.

COOPERATIVE PROGRAM

An important feature of the Institute curriculum is the cooperative work program, in which every student spends six months (two non-consecutive periods of three months each) in paid employment in his field of study.

This training offers each student a number of opportunities: (1) to get practical work experience before full-time employment; (2) to develop a sense of responsibility for a job; (3) to correlate classroom theory with practical problems.

Faculty coordinators make periodic visits to the cooperating establishments to discuss the progress of students. A brief report of each student's performance is made at the end of every employment period.



Chemical Technology student at work in industry

EXTENSION PROGRAM

The Extension Division of the Institute offers two and three-year programs and unit courses on a part-time basis to employed men and women. Its purpose is to provide an opportunity for the adults of the community to extend their education on a post-high school level and for graduates of the day program to continue their education in specialized fields. A certificate is awarded to the student who satisfactorily completes any one of the curricula.

The courses are conducted in the late afternoon or evening during two twelve-week terms and one six-week term per year. The courses offered during the six-week spring term are elective and are not a requirement for a certificate in the two and three-year curricula.

CURRICULA

- Chemical Technology
- Electrical Technology
- Industrial Management
- Mechanical Technology
- Medical Office Assistant
- Technical Office Assistant

An applicant for admission must satisfy the Director of Admission by personal interview that he is qualified to profit by the instruction given and can successfully complete the program of study selected. High school graduation is not required but the completion of a four-year secondary school course or its equivalent is desirable.

FEES AND TUITION

The Extension Program is only partially supported by the State, necessitating payment by the student of modest tuition and laboratory fees. The tuition rate is four dollars per credit hour.

REQUIREMENTS FOR ADMISSION

1. Completion of a four-year course of high school study.
2. Evidence of satisfactory physical condition.
3. An application for admission must be made on an official form supplied by the Institute. These forms may be obtained on request at the office of the Registrar.
4. A fee of ten dollars must accompany each application.
5. Each applicant will be interviewed by the members of the Committee on Admissions. An appointment will be made after the applicant's fee, application and other required credentials have been received in the Registrar's office.

Address correspondence to the Registrar at the

NEW YORK STATE
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227 Washington Street
Binghamton, New York

CALENDAR

1948

Labor Day	Sept. 6
Summer term ends	Sept. 17
Registration - First year students	Sept. 23
Registration - Second year students	Sept. 27
Fall term classes begin	Sept. 28
Election Day - No classes in the afternoon	Nov. 2
Thanksgiving recess begins 5 p.m.	Nov. 23
Thanksgiving recess ends	Nov. 28
Fall term ends 5 p.m.	Dec. 23

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Registration - Winter term	Jan. 3
Classes begin 8 a.m.	Jan. 4
Winter term ends	March 25
Spring term begins	April 4
Easter recess begins 5 p.m.	April 14
Easter recess ends	April 17
Decoration Day recess	May 28-31
Spring term ends	June 24

SCHOOL YEAR

Each year is divided into four terms of twelve weeks each. Three terms will be spent in study at the Institute and the fourth in employment.